Amendments to the Specification

The paragraph starting at page 4, line 12 and ending at line 19 has been amended as follows.

In a second type of a print head (horizontally arranged head), ~~in which~~ ink ejecting sections, from which black ink, cyan ink, magenta ink, and yellow ink, respectively, are ejected, are arranged in parallel with the main scanning direction, for example, as shown in FIG. 12. With a print head in this form, a single scan allows all the color inks to be ejected to the same area on a print medium in accordance with image data.

The paragraph starting at page 6, line 2 and ending at line 10 has been amended as follows.

Further, as shown in FIG. 13, to form a higher-quality image, a 6-color print head may be used in which ink ~~injecting~~ ejecting sections for black ink, cyan ink, magenta ink, and yellow ink, as well as light cyan and light magenta ink are arranged parallel with one another. Even with this 6-color print head, color non-uniformity may be caused by a difference in color overlapping order between forward printing and backward printing, as with the 4-color print head in Fig. 12.

The paragraph starting at page 6, line 11 and ending at line 21 has been amended as follows.

As described above, there are two types of print head arrangements suitable for an ink jet printing apparatus that carries out color ~~printing;~~ printing: an arrangement (vertically arranged head) in which the nozzle rows for the respective ink colors are arranged in a line and an arrangement (horizontally arranged head) in which the nozzle rows are arranged parallel with one another. The parallel arrangement is suitable for high-speed printing. However, with this arrangement, color non-uniformity may be caused by a difference in color overlapping order between forward printing and backward printing.

The paragraph starting at page 7, line 4 and ending at line 6 has been amended as follows.

However, even an ink jet printing apparatus using a print head in which nozzle rows are symmetrically arranged has the following ~~problem:~~ problem.

The paragraph starting at page 8, line 17 and ending at page 9, line 3 has been amended as follows.

Further, the present invention provides an ink jet printing apparatus that prints a print medium by causing a printing section having nozzle rows corresponding to respective colors and each composed of a plurality of nozzles arranged in a predetermined direction to carry out a main scan in a direction orthogonal to the predetermined direction, while causing the printing section to eject ink onto the print medium during the scan, the

apparatus being characterized in that in the direction orthogonal to the predetermined direction, between nozzle rows for a first and second ink colors having the largest hue difference from each other among the plurality of colors, nozzle rows for at least two colors other than the first and second colors are arranged.

The paragraph starting at page 10, line 16 and ending at page 11, line 2 has been amended as follows.

Further, the present invention provides an ink jet printing method of printing a print medium by causing a printing section having nozzle rows corresponding to respective colors and each composed of a plurality of nozzles arranged in a predetermined direction to carry out a main scan in a direction orthogonal to the predetermined direction, while causing the printing section to eject ink onto the print medium during the scan, the method being characterized in that in the direction orthogonal to the predetermined direction, between nozzle rows for a first and second ink colors having the largest hue difference from each other among the plurality of colors, nozzle rows for at least two colors other than the first and second colors are arranged.

The paragraph starting at page 12, line 14 and ending at line 23 has been amended as follows.

Further, the present invention provides an ink jet print head having nozzle rows corresponding to respective colors and each composed of a plurality of nozzles arranged in a first direction, the print head being characterized in that in a second direction orthogonal to the first direction, between nozzle rows for ~~a~~ first and second ink colors having the largest hue difference from each other among the plurality of colors, nozzle rows for at least two colors other than the first and second colors are arranged.

The paragraph starting at page 16, line 9 and ending at line 17 has been amended as follows.

In this case, the hue angle H refers to an angle on an a*b* plane and $H=\tan^{-1}(b^*/a^*)$. That is, if one of the colors has a colorimetric value (a*b*) of $(a_1^*b_1^*)$ and the other has a colorimetric value (a*b*) of $(a_2^*b_2^*)$, then the first color has a hue angle H1 of $\tan^{-1}(b_1^*/a_1^*)$, while the second color has a hue angle H2 of $\tan^{-1}(b_2^*/a_2^*)$. Therefore, the hue difference between the two colors (first and second colors) can be determined by $DH=|\tan^{-1}(b_1^*/a_1^*)- \tan^{-1}(b_2^*/a_2^*)|$.

The paragraph starting at page 18, line 10 and ending at line 14 has been amended as follows.

Figs. 14A to 14F are schematic views ~~are schematic views~~ showing how inks impact and are then fixed to a print medium in the order of magenta ink and cyan ink

if there is a sufficient time interval between impacting of magenta ink and impacting of cyan ink.

The paragraph starting at page 24, line 1 and ending at line 8 has been amended as follows.

Figs. 14A to 14B show the state observed during backward printing after ink has impacted a print medium and before a dot is formed, compared to Figs. 3A to 3F showing an impacting ~~cross-section~~ cross-section observed during forward printing. Compared to Fig. 3F, in Fig. 14F, more dye from the previously impacted ink is fixed to the front layer of the medium than dye from the subsequently impacted ink. Thus, there occurs a difference in hue between dots.

The paragraph starting at page 40, line 25 and ending at page 41, line 19 has been amended as follows.

In the above description of Embodiments 1 to 4, the printing section (ink ejecting section) is provided with the color nozzle rows corresponding to the four or six colors. However, the present invention is not limited to the four or six colors. For example, it is possible to use a 7-color arrangement using the previously described six colors and light black, or an arrangement using the previously described six colors and another ink (for example, dark yellow). Further, in the above description of Embodiments

1 to 4, C, M, Y, K, LC, and LM are taken as examples of ink colors used. However, the present invention is not limited to these ink colors. For example, light black, light yellow, blue, orange, or the like may be used. In either way, the printing section (ink ejecting section) may be configured so that in the direction orthogonal to the nozzle arrangement direction, between the nozzle rows for the two colors having the largest color difference, at least two nozzle rows for colors other than the above two colors are arranged or may be configured so that the nozzle rows for the two colors having the largest hue difference are arranged at the opposite ends in the direction orthogonal to the nozzle arrangement direction.

The paragraph starting at page 42, line 9 and ending at page 43, line 5 has been amended as follows.

Further, in Embodiments 2 to 4, described above, the six color nozzle rows are formed in one chip of the same print head. However, the present invention is not limited to this aspect. The color nozzle rows may be formed in different chips of the same print head. Specifically, in Embodiments 2 to 4, described above, the six color nozzle rows corresponding to cyan (C), magenta (M), yellow (Y), black (K), light cyan (LC), and light magenta (LM) are provided in one chip of one print head. However, these six nozzle rows may be independently provided in different chips. In this case, one color nozzle row is provided in each chip. Accordingly, six chips are used in total. Furthermore, one of the six color nozzle rows for a particular color (for example, K) may be provided in one of two

chips, whereas the five color nozzle rows for the other colors (for example, C, M, Y, LC, and LM) may be provided in the other chip. Alternatively, the six colors may be divided into three arbitrary pairs (for example, C and LC, K and Y, and LM and M) so that the nozzle rows corresponding to these three pairs can be provided in three different chips. If the color nozzle rows included in the printing section (or ink ejecting section) are provided in different print heads, then it should be appreciated that at least one of the color nozzle rows is provided in a different chip.

The paragraph starting at page 43, line 6 and ending at line 13 has been amended as follows.

As described above, according to the ~~preset~~ present invention, if a secondary color is formed using two colors having the largest hue difference, a sufficient time is available after previously ejected ink has impacted a print medium and before subsequently ejected ink impacts the print medium. This sufficiently suppresses "color non-uniformity" caused by a difference in ink overlapping order during reciprocatory printing.

The paragraph starting at page 43, line 14 and ending at line 21 has been amended as follows.

The present invention has been described in detail with respect to preferred embodiments, and it will now be apparent from the foregoing to those skilled in the art that

changes and modifications may be made without departing from the invention in its broader ~~aspect~~ aspects, and it is the intention, therefore, ~~in~~ that the ~~apparent~~ appended claims ~~to~~ cover all such changes and modifications as fall within the true spirit of the invention.